

Patent Claims:

1. Tire pressure monitoring device for a motor vehicle which comprises a tire pressure monitoring system with direct measurement including a transmission device for transmitting tire pressure values determined by means of pressure sensors, and a tire pressure monitoring system with indirect measurement that operates on the basis of wheel speed sensors,
c h a r a c t e r i z e d in that the tire pressure monitoring system with direct measurement includes a tire pressure measuring device for measuring a tire pressure value only on each wheel of a driven vehicle axle and on at most one wheel of a non-driven axle, and in that the tire pressure monitoring system with indirect measurement includes, in particular exclusively, wheel speed sensors on the non-driven vehicle axle.
2. Tire pressure monitoring device as claimed in claim 1,
c h a r a c t e r i z e d in that the transmission unit comprises a transmitting and receiving unit which allows wireless transmission of the tire pressure values.
3. Tire pressure monitoring device as claimed in claim 2,
c h a r a c t e r i z e d in that one single central reception antenna that is connected to the receiving unit is allocated to all transmitting units of the individual tire pressure measuring devices.

4. Tire pressure monitoring device as claimed in claim 2,
c h a r a c t e r i z e d in that a reception antenna
which is arranged in direct vicinity of the respective
transmitting unit is allocated to each transmitting unit
of a tire pressure measuring device, and the individual
antennas are connected to the receiving unit.
5. Tire pressure monitoring device as claimed in at least
one of claims 1 to 4,
c h a r a c t e r i z e d in that the indirect tire
pressure monitoring system additionally includes another
wheel speed sensor on the driven axle or on a wheel of the
driven axle.
6. Tire pressure monitoring device as claimed in at least
one of claims 1 to 4,
c h a r a c t e r i z e d in that the indirect tire
pressure monitoring system includes wheel speed sensors on
all vehicle wheels.
7. Tire pressure monitoring device as claimed in at least
one of claims 1 to 6,
c h a r a c t e r i z e d in that the evaluating unit is
provided with information about the yaw rate and/or the
lateral acceleration of the vehicle by way of at least one
additional driving dynamics sensor.
8. Method of monitoring tire pressure, in particular for a
tire pressure monitoring device as claimed in at least
any one of claims 1 to 7,
c h a r a c t e r i z e d by the process steps of
- determining the tire pressure values

- starting a learning mode for determining reference values from the wheel speed values of the tire pressure monitoring system of indirect measurement,
 - determining threshold values for a tire pressure loss from the established reference values,
 - establishing current comparison values from the wheel speed values of the tire pressure monitoring system of indirect measurement, and
 - evaluating the difference between the currently measured comparison value and the reference value and the tire pressure values in consideration of the detection thresholds with respect to tire pressure loss.
9. Method of monitoring the tire pressure as claimed in claim 8,
c h a r a c t e r i z e d in that the tire pressure monitoring system with indirect measurement processes only wheel speed information of the non-driven wheels for establishing the tire pressure values or corresponding characteristic quantities.
10. Method of monitoring the tire pressure as claimed in claim 8 or 9,
c h a r a c t e r i z e d in that the current comparison values and preferably also the reference values comprise a quotient, and the counter thereof is produced at least from the difference or the sum of two characteristic quantities of the non-driven axle that describe the wheel rotational speed, and with the denominator being produced at least from a standardized quantity which is preferably

- a) determined with characteristic quantities of the non-driven axle, and/or
 - b) determined with a characteristic quantity of the driven axle.
11. Method of monitoring the tire pressure as claimed in at least any one of claims 8 to 10,
c h a r a c t e r i z e d in that the learning mode is started by actuating a reset button.
12. Computer program product,
c h a r a c t e r i z e d in that said product defines an algorithm which comprises a method according to at least any one of claims 8 to 11.